1. (Currently amended) A method of fabricating an electronic device, comprising the steps of:

a) providing a coil of conductor and an insulation, said coil of conductor having a coil outer surface and a coil inner surface, said insulation on said coil outer surface, said coil of conductor further comprising a coil length;

b) forming openings in portions of said insulation on said coil outer surface and exposing conductor in said openings for external contacts; and

c) dicing completely through said coil to provide a plurality of short coils, wherein each said short coil has at least one said opening in said insulation, wherein each of said plurality of short coils has a short coil length that is less than said coil length.

2. (Previously amended) The method as recited in claim 74, wherein said providing step (a) comprises the step of providing ~~a tube and~~ a wire, and winding said wire around said tube.

3. (Previously amended) The method as recited in claim 2, wherein, in said providing step (a), said wire comprises two ends, wherein neither of said ends extends from said coil for contacting.

4. (Previously amended and withdrawn from consideration) The method as recited in claim 1, further comprising the steps of:

e) providing a substrate; and

f) surface mounting said coil to said substrate.

5. (Previously amended and withdrawn from consideration) The method as recited in claim 4, wherein, in said providing step (e), said substrate comprises a printed circuit board, a ceramic substrate, a flexible material, or an integrated circuit.

6. (Previously amended and withdrawn from consideration) The method as recited in claim 4, wherein said surface mounting step (f) comprises the step of electrically connecting conductor exposed in said opening in said insulation to said substrate.

7. (Original and withdrawn from consideration) The method as recited in claim 6, further comprising the step of providing a solder or conductive polymer, wherein said electrical connecting step comprises joining with said solder or said conductive polymer.

8. (Original and withdrawn from consideration) The method as recited in claim 7, wherein said joining step comprises providing solder paste between said substrate and said conductor exposed in said window and heating to reflow said solder.

9. (Previously amended and withdrawn from consideration) The method as recited in claim 4, further comprising the step of mounting additional electronics on said substrate.

10. (Original and withdrawn from consideration) The method as recited in claim 9, further comprising the step of connecting said additional electronics to said coil.

11. (Original and withdrawn from consideration) The method as recited in claim 10, further comprising the step of providing a housing for holding said coil, said substrate, and said additional electronics.

12. (Original and withdrawn from consideration) The method as recited in claim 11, further comprising the step of hermetically sealing said housing.

13. (Original and withdrawn from consideration) The method as recited in claim 11, further comprising the step of providing pins for external connection through said housing.

14. (Previously amended and withdrawn from consideration) The method as recited in claim 11, wherein said coil and said additional electronics comprise a sensor.

15. (Original and withdrawn from consideration) The method as recited in claim 14, wherein said sensor comprises a variable reluctance transducer.

16. (Original and withdrawn from consideration) The method as recited in claim 14, wherein said sensor is for measuring strain, displacement, acceleration, force, or pressure.

17. (Original and withdrawn from consideration) The method as recited in claim 14, further comprising the step of providing a circuit to correct for temperature variation.

18. (Previously amended and withdrawn from consideration) The method as recited in claim 17, wherein said circuit is integrated within said housing.

19. (Previously amended and withdrawn from consideration) The method as recited in claim 17, wherein said circuit is located within signal conditioning electronics separate from said housing.

20. (Original and withdrawn from consideration) The method as recited in claim 9, wherein said additional electronics provides excitation or synchronous demodulation.

21. (Previously amended and withdrawn from consideration) The method as recited in claim 9, wherein said additional electronics converts an ac waveform to a dc voltage.

22. (Previously amended and withdrawn from consideration) The method as recited in claim 1, further comprising the step of enclosing said coil in a housing and hermetically sealing said housing.

23. (Previously amended and withdrawn from consideration) The method as recited in claim 1, wherein said step of forming openings in portions of said insulation comprises laser ablating said insulation.

24. (Previously amended and withdrawn from consideration) The method as recited in claim 23, wherein said step of laser ablating said insulation, comprises directing light from a laser on said insulation.

25. (Previously amended and withdrawn from consideration) The method as recited in claim 23, wherein said coil comprises a plurality of turns of said wire and wherein said step of laser ablating said insulation comprises opening said insulation over a plurality of said turns of wire.

26. (Previously amended and withdrawn from consideration) The method as recited in claim 23, wherein said step of laser ablating said insulation comprises ablating a ring shaped opening in said insulation.

27. (Original) The method as recited in claim 1, wherein said insulation comprises polyimide.

28. (Previously amended) The method as recited in claim 75, further comprising the step of providing a structure for holding position of said core within said tube.

29. (Previously amended) The method as recited in claim 28, further comprising the step of providing a structure for resetting position of said core within said tube.

30. (Previously amended) The method as recited in claim 29, wherein said structure for resetting position of said core within said tube comprises an electronically controllable clamp.

31. (Original) The method as recited in claim 30, wherein said electronically controllable clamp comprises a shape memory alloy.

32. (Previously amended) The method as recited in claim 29, wherein said structure for resetting position of said core further comprises a spring so said core can snap to a new position when said clamp is released.

72. (Previously added) The method as recited in claim 1, wherein said step of forming openings in portions of said insulation comprises abrading said insulation.

73. (Previously added and withdrawn from consideration) The method as recited in claim 1, wherein said step of forming openings in portions of said insulation comprises chemically etching said insulation.

74. (Previously added) The method as recited in claim 1, further comprising the step of providing a tube, said tube having an outer surface and an inner surface, wherein said providing step (a) comprises providing said coil ~~of conductor~~ inner surface and said insulation on a said tube outer surface.

75. (Currently amended) The method as recited in claim 74, further comprising the ~~step~~ steps of providing a movable core within said tube inner surface and moving said movable core within said tube inner surface for adjusting inductance of said coil.

76. (Currently amended) The method as recited in claim ~~75~~ 74, further comprising the steps of:

e) providing a substrate; and

f) surface mounting said coil to said substrate.

77. (Previously added) The method as recited in claim 76, wherein, in said providing step (e), said substrate comprises a printed circuit board, a ceramic substrate, a flexible material, or an integrated circuit.

78. (Previously added) The method as recited in claim 76, wherein said surface mounting step (f) comprises the step of electrically connecting conductor exposed in said opening in said insulation to said substrate.

79. (Previously added) The method as recited in claim 78, further comprising the step of providing a solder or conductive polymer, wherein said electrical connecting step comprises joining with said solder or said conductive polymer.

80. (Previously added) The method as recited in claim 79, wherein said joining step comprises providing solder paste between said substrate and said conductor exposed in said window and heating to reflow said solder.

81. (Previously added) The method as recited in claim 76, further comprising the step of mounting additional electronics on said substrate.

82. (Previously added) The method as recited in claim 81, further comprising the step of connecting said additional electronics to said coil.

83. (Previously added) The method as recited in claim 82, further comprising the step of providing a housing for holding said coil, said substrate, and said additional electronics.

84. (Previously added) The method as recited in claim 83, further comprising the step of hermetically sealing said housing.

85. (Previously added) The method as recited in claim 83, further comprising the step of providing pins for external connection through said housing.

86. (Previously added) The method as recited in claim 83, wherein said coil and said additional electronics comprise a sensor.

87. (Previously added) The method as recited in claim 86, wherein said sensor comprises a variable reluctance transducer.

88. (Previously added) The method as recited in claim 86, wherein said sensor is for measuring strain, displacement, acceleration, force, or pressure.

89. (Previously added) The method as recited in claim 86, further comprising the step of providing a circuit to correct for temperature variation.

90. (Previously added) The method as recited in claim 89, wherein said circuit is integrated within said housing.

91. (Previously added) The method as recited in claim 89, wherein said circuit is located within signal conditioning electronics separate from said housing.

92. (Previously added) The method as recited in claim 81, wherein said additional electronics provides excitation or synchronous demodulation.

93. (Previously added) The method as recited in claim 81, wherein said additional electronics converts an ac waveform to a dc voltage.

94. (Previously added) The method as recited in claim 75, further comprising the step of enclosing said coil in a housing and hermetically sealing said housing.

95. (Previously added) The method as recited in claim 75, wherein said step of forming openings in portions of said insulation comprises laser ablating said insulation.

96. (Previously added) The method as recited in claim 95, wherein said step of laser ablating said insulation, comprises directing light from a laser on said insulation.

97. (Previously added) The method as recited in claim 96, wherein said laser comprises an excimer laser.

98. (Previously added) The method as recited in claim 95, wherein said coil comprises a plurality of turns of said wire and wherein said step of laser ablating said insulation comprises opening said insulation over a plurality of said turns of wire.

99. (Previously added) The method as recited in claim 95, wherein said step of laser ablating said insulation comprises ablating a ring shaped opening in said insulation.

100. (Previously added) The method as recited in claim 2, wherein said wire comprises an insulated wire and said step (a) comprises winding said insulated wire around said tube.

101. (Previously added and withdrawn from consideration) The method as recited in claim 24, wherein said laser comprises an excimer laser.

102. (Currently amended) A method of fabricating an electronic device, comprising in order, the steps of:

a) providing a coil of conductor and an insulation, said coil of conductor having a coil outer surface and a coil inner surface, said insulation on said coil outer surface, said coil of conductor further comprising a coil length;

b) forming openings in portions of said insulation on said coil outer surface and exposing conductor in said openings for external contacts;

c) dicing through said coil to provide a plurality of short coils, wherein each said short coil has at least one said opening in said insulation, wherein each of said plurality of short coils has a short coil length that is less than said coil length;

d) providing a substrate;

e) surface mounting said coil to said substrate;

f) mounting additional electronics on said substrate;

g) connecting said additional electronics to said coil; and

h) providing a housing for holding said coil, said substrate, and said additional electronics.

103. (Currently amended) A method of fabricating an electronic device, comprising in order, the steps of:

a) providing a coil of conductor, an insulation, and a tube, said coil of conductor having a coil outer surface and a coil inner surface, said insulation on said coil outer surface, wherein said tube has a tube outer surface and a tube inner surface, and wherein said coil of conductor and said insulation are on said tube outer surface, further wherein said coil of conductor further comprises a coil length;

b) forming openings in portions of said insulation on said coil outer surface and exposing conductor of said coil for contacts;

c) dicing through said coil to provide a plurality of short coils, wherein each said short coil has at least one said opening in said insulation, wherein each of said plurality of short coils has a short coil length that is less than said coil length; and

d) providing a movable core within said tube and providing for moving said movable core within said tube for adjusting inductance of said coil.